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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RAO, MANJUNATH N	
ART UNIT	PAPER NUMBER
1652	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/777,828	CLAUSEN ET AL.	
	Examiner	Art Unit	
	Manjunath N. Rao, Ph.D.	1652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *38 and 41-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *38, 41-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 38, 41-43 are currently pending in this application.

Applicants' amendments and arguments filed on 10-6-06 have been fully considered and are deemed to be persuasive to overcome the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. Examiner acknowledges, amendment to first line of the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 38, 41-43 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by either a specific and substantial asserted utility or a well-established utility.

The applicant has not asserted at least one utility for the claimed isolated polynucleotides. Other than the polynucleotide sequence, SEQ ID NO: 8, the specification provides little functional characterization of this polynucleotide. The specification lists the use for the polynucleotide SEQ ID NO: 8 as "that which encodes a polypeptide having UDP-galactose:β-N-acetylglucosamine β 1,3 galactosyltransferase (β3gal-T5) activity", however, there is no information that links the use of the polypeptide encoded by SEQ ID NO:8 to that claimed in the instant claims. Thus the asserted utility of the claimed polynucleotides and its complement sequence is not substantial or specific. Further, while the claims disclose the claimed polynucleotide as "probes", that is not a utility specific to the claimed polynucleotide sequence

since the claim does not make it clear as to what or which polynucleotide can be probed using the claimed polynucleotide.

Claims 38, 41-43 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a specific and substantial asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention (see the following rejection below). While the claims are drawn to "probes" one of ordinary skill in the art would not know how to use said probe or identify which polynucleotide using the claimed polynucleotide as probe.

Applicant is referred to the revised interim guidelines concerning compliance with utility requirement of U.S.C. 101, published in the Official Gazette and also available at www.uspto.gov.

In response to the previous Office action, applicants have traversed the above rejection arguing that the claimed probes have a specific and substantial utility, which is the identification of β3Gal-T5 genes and that the nucleic acids hybridize to β3Gal-T5 and not other family members. Applicants also argue β3Gal-transferases catalyze linkages found in the glycoproteins of normal epithelium (type 1 chain) and malignant epithelium (type 2 chain) (specification, page 2, lines 1-19) etc. and thus, the claimed probes are "of considerable interest to define the gene(s) responsible for formation of these core structures [type II chain structures] in ... malignant epithelium". Applicants maintain that this utility is substantial and specific because the β3Gal-T5 genes identified with the claimed probe can be used, for example, diagnostically to distinguish normal from neoplastic epithelial cells. Next, applicants recite the following from the MPEP

> "[A] claim to a polynucleotide whose use is disclosed simply as a "gene probe" or "chromosome marker" would not be considered to be specific in the absence of a disclosure of a specific DNA target." MPEP § 2107.01.

and conclude that the specification discloses the specific DNA target, i.e., the β3Gal-T5 gene and thus the claimed invention has specific utility.

Applicants also argue that the claimed invention's utility is substantial because, as stated in MPEP § 2107.03:

> "The applicant does not have to prove that a correlation exists between a particular activity and an asserted therapeutic use of a compound as a matter of statistical certainty, nor does he or she have to provide actual evidence of success in treating humans where such as utility is asserted. Instead, as the courts have repeatedly held, all that is required is a reasonable correlation between the activity and the asserted use. *Nelson v. Bowler,* 626 F.2d 853, 857, 206 USPQ 881, 884 (CCPA 1980)."

Applicants submit that as set forth above, there is reasonable correlation between use of the claimed probes to identify and isolate the β3Gal-T5 gene or segments thereof from individuals, which in turn can be used to characterize the sequence of this gene or segments thereof in malignant epithelial cells. Accordingly, Applicants submit that the claimed nucleic acid probes of this invention have a specific and substantial utility in accordance with 35 U.S.C. § 101.

Examiner respectfully disagrees with all the above arguments as being persuasive to overcome the above rejection. Examiner also reiterates that applicants are interpreting the MPEP and the court decision handed down in *Nelson v. Bowler* erroneously. While the specification may teach a polynucleotide encoding a β3Gal-T5 and its uses to identify malignant cells, the claims are not drawn to either the probes of that particular gene or to identify said polynucleotide. As can be seen, claims are simply drawn to probes and there is no functional aspect attached to the claimed probes or the target. While the claims are to be analyzed in light

of the contents of the specification, the contents of the specification cannot be automatically construed as claim limitations. Applicants erroneously conclude that since the specification explains or discloses the polynucleotide encoding β3-Gal-T5, claims are automatically limited to probes or target polynucleotides having said property. As stated in the rejection, without providing the functional aspect of the target polynucleotide or the probe claimed, those of ordinary skill in the art would be subject to undue experimentation to not only make the probes but also to find out a use for said probes. Furthermore, it would also be impossible for those skilled in the art to first of all to find a hybrid comprising a polynucleotide that is either just a minimum of two nucleotides in length or 9999 nucleotides in length that has hybridized to a polynucleotide comprising just 20 nucleotides of the nucleotides 1-115 or 428-1011 of SEQ ID NO:8 under the claimed hybridization conditions. A hybrid even if formed would be so unstable because of the enormous difference in lengths that it would fall apart under the claimed hybridization conditions. Finally, even if one of ordinary skill in the art does find such a probe, he or she would not know how to use the same without being subject to undue experimentation. Therefore, the above rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 38, 41-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an isolated polynucleotide of less than 10,000 nucleotides wherein is said polynucleotide hybridizes to at least to the full length of coding

portion of SEQ ID NO:8 under stringent conditions of claim 1, and wherein said polynucleotide is a full length polypeptide having UDP-galactose:β-N-acetylglucosamine β 1,3 galactosyltransferase (β3gal-T5) encoding activity, does not reasonably provide enablement for any such polynucleotide or a complement thereof which simply hybridizes to any 20 contiguous nucleotides of nucleotides 1-115 of SEQ ID NO:8 or nucleotides 428-1011 of SEQ ID NO:8 under stringent conditions of claim 1 and exhibits no activity. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims.

Factors to be considered in determining whether undue experimentation is required, are summarized in *In re Wands* (858 F.2d 731, 8 USPQ 2nd 1400 (Fed. Cir. 1988)) as follows: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claim(s).

Claims 38, 41-43 are so broad as to encompass any polynucleotide or a complement thereof that is less than 10,000 nucleotides in length (i.e., any where from a minimum of 2 nucleotides to 9999 nucleotides in length), which simply hybridizes to any 20 contiguous nucleotides of nucleotides 1-115 of SEQ ID NO:8 or nucleotides 428-1011 of SEQ ID NO:8 under stringent conditions of claim 1 and exhibits no activity. The scope of the claims is not commensurate with the enablement provided by the disclosure with regard to the extremely large number of polynucleotides broadly encompassed by the claims. Since the amino acid sequence of a protein encoded by a given polynucleotide determines its structural and functional

properties, predictability of which changes can be tolerated in said encoded protein's amino acid sequence and obtain the desired activity requires a knowledge of and guidance with regard to which amino acids in the protein's sequence, if any, are tolerant of modification and which are conserved (i.e. expectedly intolerant to modification), and detailed knowledge of the ways in which the proteins' structure relates to its function.

Furthermore, claims are also not simply enabled for a polynucleotide having no known or usable activity that is any where from 2 nucleotides in length to 9999 nucleotides in length wherein said nucleotide hybridizes to a second nucleotide comprising at least 20 contiguous nucleotides of the sequence comprising nucleotides 1-115 or 428-1011 of SEQ ID NO:1 having any activity under the hybridization conditions claimed because, it would be impossible to form a stable and detectable hybrid under the claimed hybridization conditions.

Simply put, above claims encompass variants of polynucleotide SEQ ID NO:8 which have no function of encoding a functional polypeptide and applicants have not taught those skilled in the art as to where exactly on the polynucleotide sequence of SEQ ID NO:8 specific nucleotides can be modified (i.e., by insertion, deletion or substitution), and how to select those modified sequences that show any utility (i.e., encoding a functional polypeptide). Furthermore, it would also require undue experimentation by those skilled in the art to use polynucleotides without knowing as to what polypeptide it encodes. Therefore it would be an undue burden to those skilled in the art to use the claimed polynucleotide without knowing how to use the encoded polypeptide whose activity applicants have not disclosed in the claim. The specification is limited to teaching the use of the polynucleotide with SEQ ID NO:8 to encode the polypeptide having UDP-galactose:β-N-acetylglucosamine β 1,3 galactosyltransferase (β3gal-T5) activity

and use it as a specific glycosyltransferase but provides no guidance with regard to the making of variants and mutants or with regard to the other uses indicated above. In view of the great breadth of the claim, amount of experimentation required to make and use the claimed polynucleotides, the lack of guidance, working examples, and unpredictability of the art in predicting function from a polypeptide primary structure (e.g., see Ngo et al. in The Protein Folding Problem and Tertiary Structure Prediction, 1994, Merz et al. (ed.), Birkhauser, Boston, MA, pp. 433 and 492-495, Ref: U, Form-892), the claimed invention would require undue experimentation. As such, the specification fails to teach one of ordinary skill how to use the full scope of the polypeptides encompassed by this claim.

While recombinant and mutagenesis techniques are known, it is not routine in the art to screen for multiple substitutions or multiple modifications or multiple uses, as encompassed by the instant claims, and the positions within a polynucleotide sequence leading to variants or mutants through which amino acid modifications can be made with a reasonable expectation of success in obtaining the desired activity/utility are limited in any encoded protein, and the result of such modifications is unpredictable. In addition, one skilled in the art would expect any tolerance to modification for a given protein to diminish with each further and additional modification, e.g. multiple substitutions.

The specification does not support the broad scope of the claims which encompass all modifications and fragments of any polynucleotide or a complement thereof which simply hybridizes to any 20 contiguous nucleotides of nucleotides 1-115 of SEQ ID NO:8 or nucleotides 428-1011 of SEQ ID NO:8 under stringent conditions of claim 1 and exhibits no encoding activity because the specification does not establish: (A) regions of the polynucleotide

structure which may be modified without affecting its activity of encoding the polypeptide having the specific glycosyltransferase activity; (B) the general tolerance of polynucleotides encoding such glycosyltransferases to modification and extent of such tolerance; (C) a rational and predictable scheme for modifying any nucleotide on the polynucleotide with an expectation of obtaining the desired biological function; (D) specific uses for polypeptides encoded by the claimed polynucleotides and (E) the specification provides insufficient guidance as to which of the essentially infinite possible choices is likely to be successful .

Thus, applicants have not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed invention in a manner reasonably correlated with the scope of the claims broadly including polynucleotides with an enormous number of nucleotide modifications to SEQ ID NOS: 8 and the broad type of uses for the encoded polypeptides. The scope of the claims must bear a reasonable correlation with the scope of enablement (*In re Fisher*, 166 USPQ 19 24 (CCPA 1970)). Without sufficient guidance, determination of polynucleotides having the desired biological characteristics is unpredictable and the experimentation left to those skilled in the art is unnecessarily, and improperly, extensive and undue. See *In re Wands* 858 F.2d 731, 8 USPQ2nd 1400 (Fed. Cir, 1988).

Claims 38-41 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. These claims are directed to a genus of DNA molecules with either SEQ ID NO:8 or DNA having the limitations of simply hybridizing to nucleotide 1-

115 or nucleotides 428-1011 of SEQ ID NO:8 under the stringent conditions described in claim 1. The specification does not contain any disclosure of the function of all DNA sequences that simply hybridize to nucleotide 1-115 or nucleotides 428-1011 of SEQ ID NO:8 under the stringent conditions described in claim 1. The genus of DNAs that comprise these above DNA molecules is a large variable genus with the potentiality of encoding many different proteins. Therefore, many functionally unrelated DNAs are encompassed within the scope of these claims, including partial DNA sequences. The specification discloses only a single species of the claimed genus, which is insufficient to put one of skill in the art in possession of the attributes and features of all species within the claimed genus. Therefore, one skilled in the art cannot reasonably conclude that the applicant had possession of the claimed invention at the time the instant application was filed.

Applicant is referred to the revised guidelines concerning compliance with the written description requirement of U.S.C. 112, first paragraph, published in the Official Gazette and also available at www.uspto.gov.

In response to both the above rejections, applicants submit the specification is enabled and describes the claimed probes. Applicants maintain that the claims are directed to probes and that a "probe" is "a nucleic acid that forms a hybrid structure with a sequence in a target region due to complementarily [sic] of at least one sequence in the probe with a sequence in the target region" (specification, page 10, lines 1-3) and that the claims are not directed to nucleic acids encoding polypeptides that necessarily possess β3Gal-transferase activity. Applicants argue that the claims are directed to probes and require the skilled artisan to identify: (1) an isolated nucleic acid or complement thereof of less than 10,000 contiguous nucleotides, which (2)

hybridizes with a second nucleic acid comprising a specified sequence under (3) certain hybridization conditions and each of these steps can be routinely performed by one of ordinary skill in the art without undue experimentation and that none of these steps require that the probe encode anything. Examiner respectfully disagrees that such an argument is persuasive to overcome the above rejection. Examiner's main contention is that claims are simply drawn to probes that one skilled in the art would be subject to undue experimentation first to make it and next to use it. If according to the applicant claims are simply drawn to "probes" that does not require either the target nucleotides or probes themselves to encode any protein having an established activity, then the question arises as to how those skilled in the art would use those probes. Applicants have completely failed to address these questions and maintain a tangential argument that claims are enabled and described. Unless and until claims disclose the functional aspect of the target and the probe those skilled in the art would not know how to make them and use them. Therefore, Examiner continues to maintain the above rejection. Examiner maintains the written description rejection as well because as explained in the rejection, claims are drawn to probes whose function is not described.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 38, 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Szulzewsky et al. (GenBank Accession No. AJ003597, 4 Dec 1997). This rejection is based upon the public availability of a printed publication for more than one year prior to the date of application for patent in the United States. Claims 38, 39 and 41 of the instant application are drawn to an isolated polynucleotide or a complement thereof, which simply hybridizes to any 20 contiguous nucleotides of nucleotides 1-115 of SEQ ID NO:8 under stringent conditions of claim 1 and exhibits no encoding activity. Szulzewsky et al. discloses such a polynucleotide, which has more than 90% sequence identity in the region of nucleotides 93-115 and is therefore capable of hybridizing to nucleotides 1-115 of SEQ ID NO:8. Thus Szulzewsky et al. anticipate claims 38, 41 of this application as written.

In response to the above rejection, applicants argue that claim 38 has been amended to recite conditions of high stringency, which would exclude the nucleic acid of Szulzewsky. Examiner respectfully disagrees. Szulzewsky discloses a 338 nucleotide sequence in which nucleotides 314-335 have an about 91% identity match to nucleotides 93-115 of the 933 nucleotide sequence represented by SEQ ID NO: 8. As per the applicant's claim if a polynucleotide that is at least 9999 nucleotides in length can hybridize to a polynucleotide comprising just 20 nucleotides of nucleotides 1-115 or 428-1011 of SEQ ID NO:8, then Examiner takes the position that the reference polynucleotide comprising 338 nucleotides and a portion of nucleotides has a 91% match to nucleotides 93-115 of SEQ ID NO:8 can indeed hybridize. Examiner maintains that contrary to applicant's argument, the reference

polynucleotide can be considered as a "probe" fulfilling the claim limitations and that said probe would hybridize even under the stringent conditions set forth in claim 38.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 38-41 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,800,468. An obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but an examined application claim is not patentably distinct from the reference claim, because the examined claim is either anticipated by, or would have been obvious over the reference claim. See, e.g., *In re Berg*, 140 F.3d 1428,46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi* 759 F.2d 887,225 USPQ 645 (Fed. Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other. Claims 38-41 of the instant application and claims 1-10 of the reference patent are both directed to polynucleotides capable of hybridizing with nucleotides 1-115 and 428-1011 of SEQ ID NO:8. Among all the different polynucleotides claimed in the

instant application and in the reference patent a good number of them are identical to one another. The portion of the specification (and the claims) in the reference patent that supports the recited polynucleotides includes several embodiments that would anticipate the polynucleotides claimed in claims 38-41 herein. Claims of the instant application listed above cannot be considered patentably distinct over claims 1-10 of the reference patent when there is specifically recited embodiment that would anticipate mainly claims 38-41 of the instant application. Alternatively, claims 38-41 cannot be considered patentably distinct over claims 1-10 of the reference patent when there is specifically disclosed embodiment in the reference patent that supports claims 1-10 of that patent and falls within the scope of claims 38-41 herein because it would have been obvious to one having ordinary skill in the art to modify claims 1-10 of the reference by selecting a specifically disclosed embodiment that supports those claims. One of ordinary skill in the art would have been motivated to do this because that embodiment is disclosed as being a preferred embodiment within claims 1-10 of the reference patent.

In response to the above rejection, applicants maintain that they will defer responding to this rejection until allowable subject matter is identified. However, Examiner continues to maintain the rejection for reasons of record.

Conclusion

None of the claims are allowable.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Manjunath N. Rao, Ph.D. whose telephone number is 571-272-0939. The Examiner can normally be reached on 7.00 a.m. to 3.30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Ponnathapura Achutamurthy can be reached on 571-272-0928. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300 for regular communications and for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Manjunath N. Rao, Ph.D.
Primary Examiner
Art Unit 1652

January 4, 2007